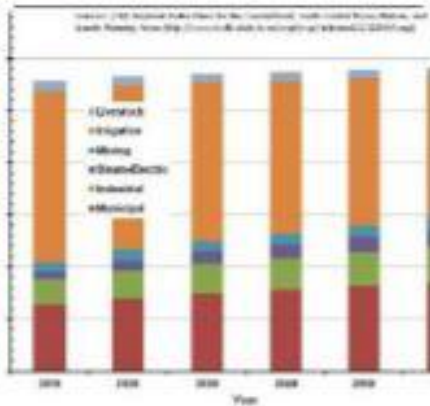
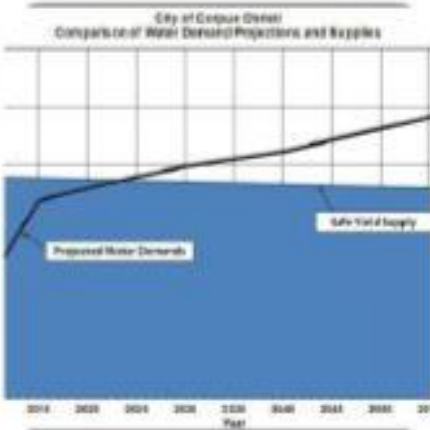


Nueces River and Corpus Christi and Baffin Bays Basin and Bay Area Stakeholders Committee

Work Plan for Adaptive Management

Submission to the Environmental Flows Advisory Group
and the Texas Commission on Environmental Quality



The Nueces BBASC
Workplan for Adaptive Management Identified 8
Priority Studies

A Study to
“Explore Landform Modifications to Nueces Bay
and Nueces Delta”
was “Priority #7

Why: Several threats and opportunities identified by the Nueces BBASC.

- a. The volume and availability of water available under existing climate conditions and administration of the current agreed order are frequently limited;**
- b. The volume of inflow under a greenhouse warmed future are expected to be less than current supply estimates;**
- c. A low likelihood of achieving the maintenance of desired salinity levels at Salt 3, and/or hoped for habitat restoration in Nueces Bay and within the Delta under current and future climate conditions;**
- d. Interest to maximize current use of pumping, possible future changes in operational practices (e.g. SMART Inflow Management), possible future reuse of effluent;**
- e. Construction of preferred habitats (e.g. *Spartina alterniflora*) without requirement for freshwater to ameliorate hypersaline soil conditions;**
- f. Used worldwide for effective management for preferred fish and wildlife resources;**
- g. Recent large and small land modifications and water control projects in Delta have beneficial outcomes;**
- h. Preliminary TWDB modeling suggest potential for salinity reduction (e.g. in Upper Nueces Bay);**
- i. Manage Sea Level Rise (SLR) impacts.**

The Adaptive Management Work Plan described the approach:

- 1. Synthesis of information on the historic, previous and current landform modification and water control structure proposals, and implemented projects, related to water management, mitigation, habitat construction, habitat enhancement (in Nueces Bay and Delta);**
- 2. Synthesis of information concerning apparent effectiveness of implemented modifications, and/or the intended justification and benefit from non-implemented proposals;**
- 3. Conduct a design charrette to review results of 1 and 2 and to identify additional concepts or ideas for further evaluation.**
- 4. Prepare preliminary conceptual plan and profile for #3 identified projects, conduct a preliminary estimate of cost and prepare a study report combining results for 1, 2, 3 and 4.**
- 5. Revisit/re-run TWDB models to verify TWDB 2000 preliminary results and, where the model is directly applicable, to evaluate projects identified in 4.**
- 6. Apply where applicable results and estimates developed under the climate change Work Plan item.**

Nueces BBASC Receives Funding for Priority Studies

Study No. 2

Explore landform modifications to Nueces Bay and Nueces Delta

This item is based on the  *Nueces River and Corpus Christi and Baffin Bays Basin and Bay Area Stakeholder Committee Work Plan*  Tier #1 Priority Project #7.

This study attempts to maximize benefits of available freshwater inflows by better understanding the effects of landform modifications in Nueces Bay and Nueces Delta. Understanding the effects of landform modifications will also assist in protecting and constructing preferred habitats. All sources of freshwater inflows will be considered including managed events such as pumping, low volume natural or induced overbank flows, effluents, and "banked" storage releases.

Deliverables from this study will include a synthesis of historic and current, proposed and implemented, landform modifications and water control structures and projects related to water management, mitigation, habitat construction, and habitat enhancement in Nueces Bay and Nueces Delta. This study will also report on the effectiveness of implemented modifications and the intended justification and benefit from non-implemented proposals. A workshop will be conducted to identify potential landform modifications or practices worthy of further evaluation. This will lead to the next project deliverable, a preliminary conceptual plan including cost estimates for projects identified in the workshop exercise. Finally, modeling exercises will be conducted to evaluate projects identified in the workshop. Funding to be allocated to this activity is not expected to exceed \$95,000 and all work and deliverables associated with the TWDB—administered funding shall be completed prior to August 31, 2015. If any supplemental work is proposed utilizing other funding sources, that work and associated deliverables may have a later completion date.

Research related to the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Area Stakeholder Committee (GSA BBASC)

Study No. 2: Explore landform modification to Nueces Bay and Nueces Delta

Statement of Qualifications

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Study Team

Years of Combined Experience Working in the
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 - Mary Kay Skoruppa
- Dr. George Ward
- Dr. Ken Dunton – UTMSI
- Dr. Ben Hodges
- TAMUCC Center for Coastal Studies
 - Brien Nicolau
 - Erin Hill